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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,432	12/31/2001	Volker Von Drach	VOND3002/REF	3103

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 07/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

A-210

Office Action Summary

Application No.

09/926,432

Applicant(s)

DRACH ET AL.

Examiner

Camie S Thompson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed May 5, 2003 have been acknowledged.
2. Examiner acknowledges amended claims 1-8 and 10-13.
3. Examiner acknowledges cancelled claims 14-16.
4. The objection to claims 1-5, 7-8 and 10-13 has been withdrawn due to applicant's amended claims.
5. The rejection of claims 1-13 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claims.
6. The rejection of claims 1, 9-10 and 12 under 35 U.S.C. 103(a) as being unpatentable over Ikuta, U.S. Patent Number 5,290,627 in view of DE 19815992 has been withdrawn due to applicant's argument regarding the priority of the instant application.

Claim Objections

7. Claims 1, 4-5, 7-8, 10 and 12 are objected to because of the following informalities: The claims are grammatically incorrect and confusing. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4 and 5 are unclear. It is unclear as to whether or not the fibers in line 2 of the claims refer to vegetable fibers or the aramid fibers.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-5, 11, 13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuta, U.S. Patent Number 5,290,627.

Ikuta discloses a friction material for operating in oil containing 5-70% of fibrillated ramie fibers and 0-30% aramid fibers as per instant claims 1-5, 11, 13 and 17-18 (see column 1, lines 5-39, Table 1 and claim 1). The reference does not disclose that the fibers have a fibril content greater than 3 are percent and less than 50 area percent. However, since 5-70% of the fiber is fibrillated, it would only follow that 3-50 area percent would be included in Ikuta's range, although not specifically stated. Further, this is an optimizable feature. The fibril content increases the wear

Art Unit: 1774

resistance. Discovery of optimum values of result effective variables involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to use a fibril content between 3 and 50 area percent in order to increase the wear resistance of the fiber mixture.

12. Claims 1, 6-8 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuta, U.S. Patent Number 5,290,627 in view of Kolla et al., U.S. Patent Number 6,133,348.

Ikuta discloses a friction material for operating in oil containing 5-70% of fibrillated ramie fibers and 0-30% aramid fibers as per instant claims 1 (see column 1, lines 5-39, Table 1 and claim 1).

The reference does not disclose that the fibers have a fibril content greater than 3 are percent and less than 50 area percent. However, since 5-70% of the fiber is fibrillated, it would only follow that 3-50 area percent would be included in Ikuta's range, although not specifically stated.

Further, this is an optimizable feature. The fibril content increases the wear resistance.

Discovery of optimum values of result effective variables involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to use a fibril content between 3 and 50 area percent in order to increase the wear resistance of the fiber mixture.

The Ikuta reference does not disclose a mixture of vegetable fibers and shives. Kolla teaches a fiber reinforced resin composition wherein the fibers are flax shives and the shives are about 10 to 80 percent based on the weight of the composition (see column 2, line 8-49). The shives added to the bast fibers reduce the "balling up" of the fibers during processing. Therefore, it would have been obvious to have a weight fraction of 10% to 80% of shives in the mixture in order to reduce the "balling up" of the flax fibers during processing.

Claim Rejections - 35 USC § 103

13. Claims 1, 9-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuta et al., U.S. Patent Number 5,290,627 in view of Holinski, U.S. Patent Number 4,663,060. Ikuta discloses a friction material for operating in oil containing 5-70% of fibrillated ramie fibers and 0-30% aramid fibers as per instant claims 1 (see column 1, lines 5-39, Table 1 and claim 1). The reference does not disclose that the fibers have a fibril content greater than 3 are percent and less than 50 area percent. However, since 5-70% of the fiber is fibrillated, it would only follow that 3-50 area percent would be included in Ikuta's range, although not specifically stated. Further, this is an optimizable feature. The fibril content increases the wear resistance. Discovery of optimum values of result effective variables involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to use a fibril content between 3 and 50 area percent in order to increase the wear resistance of the fiber mixture. Ikuta does not disclose the use of an additive such as tin sulfide for friction linings as per the instant claims. Holinski teaches a solid lubricant combination used in friction linings (see abstract). Additionally, Holinski teaches the use of metal sulfides in the additive (see column 2, lines 27-68 and reference claim 1). Although Holinski does not specifically teach the use of tin sulfide in the additive as per the instant claims, it can be expected that tin sulfide would behave as zinc sulfide (15-45 parts by weight) and antimony sulfide (5 to 20 parts by weight) that are specifically used in the Holinski additive. The lubricant is used to improve the tribological properties of the friction lining. Therefore, it would have been obvious to one of ordinary skill in the art to use a metal sulfide such as tin sulfide in

Art Unit: 1774

order to have low fatigue and high wear resistance as described by Holinski in column 8, lines 34-45).

Response to Arguments

14. Applicant's arguments filed May 5, 2003 are have been fully considered but they are not persuasive. Applicant argues obviousness of the Ikuta reference. Ikuta discloses that fibrillated fibers with a high value of freeness have high tensile strength; low strain and high wear resistance. Therefore, a reasonable expectation of success is achieved in the Ikuta reference. Applicant directs the examiners attention to page 1, lines 13-20 and page 9, lines 2-10 and 31 et seq of the specification for the definition of fibril content. Page 1 of the specification discloses the fibril diameter and length not the area percent of the fibrils. Additionally, the term "fraction" as defined in the specification does not equate to the term "content". The "fraction" of fibrils, as argued by applicant, means area percent. The "content" of fibrils indicates how many/how much are fibrils present. Examiner suggests that applicant amend claims to recite the term "fraction" instead of "content" for clarification. As written, the claims presently recite the content of the fibrils. The Ikuta reference meets the limitation of content of fibrils. Applicant argues that the Ikuta reference contains 5 to 70 weight percent of fibrillated fibers instead 5-70 weight percent of fibrils. As the claims are presently written, the fibril content is an optimizable feature. As stated in Ikuta, the high value of freeness of the fibrillated fibers has high tensile strength and high wear resistance. Applicant argues that the value of freeness does not necessarily affect the fibril content. Although the value of freeness

Art Unit: 1774

may not affect the fibril content, there is no evidence to the contrary that the freeness value does affect the fibril content. Applicant argues that the values in the Ikuta reference and the present application are not comparable. Examiner suggests amending claims to recite the differences. Applicant argues the combination of Ikuta and Kolla. Kolla discloses that shives are added to bast fibers in order to reduce the "balling up" effect of the fibers. The "balling up" of the bast fibers can be deleterious to the making the composite comprising the bast fibers. Therefore, the combination is not without motivation.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia

Application/Control Number: 09/926,432

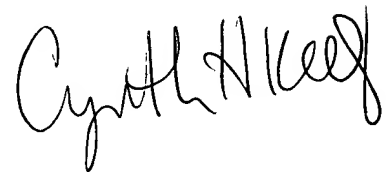
Page 8

Art Unit: 1774

H. Kelly, can be reached at (703) 308-0449. The fax phone numbers for the Group are (703) 872-9310 {before finals} and (703) 872-9311 {after finals}.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

A handwritten signature in cursive script, appearing to read "Cynthia H. Kelly", written in black ink.